



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,023	10/16/2003	Stanley W. Stone	VRO-020.01	9153

25181 7590 11/14/2006

FOLEY HOAG, LLP  
PATENT GROUP, WORLD TRADE CENTER WEST  
155 SEAPORT BLVD  
BOSTON, MA 02110

EXAMINER
----------

FOX, CHARLES A

ART UNIT	PAPER NUMBER
----------	--------------

3652

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/687,023		STONE, STANLEY W.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Charles A. Fox		3652	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 51-78 is/are pending in the application.
- 4a) Of the above claim(s) 51-59 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 and 67-78 is/are allowed.
- 6) ☒ Claim(s) 60-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### ***Drawings***

The drawings are objected to because figure 1 should have an element with dashed lines. The arm shown in the process position should be dashed as it is an alternate position for one of the arms. It should also have an element number associated with it. Figure 16C is a good example of the use of dashed lines when an element is shown to be in more than one position in the same figure. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings **will not be held in abeyance.**

Art Unit: 3652

***Election/Restrictions***

This application contains claims 51-59 drawn to an invention nonelected with traverse in Paper No. 20060316. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 60 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. New limitation regarding "an axis" is not clear if each arm has the same axis or an independent axis. In the art rejection below they are each treated as having an axis as this is not precluded by the claim as written. Amending the phrase to "a common axis" will render this rejection moot. Claim 61 has antecedent basis problems with "the axis" in two locations. As it is unclear if there are one or two axes it is unclear which one is being referred to by the phrase "the axis". Changing the word "the" to "it's" will render this rejection moot. Also making the suggested changes to claim 60 will render the 112 second paragraph rejection of claim 61 moot as the number of axes will be clarified. Correction is required.

***Claim Rejections - 35 USC § 102***

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3652

Claims 60, and 62-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Sieradzki. Regarding claim 60 Sieradzki US 5,486,080 discloses a method of transferring wafers comprising the steps of:

- retrieving a first wafer from a storage location via a first arm;
- transferring the wafer to a second arm;
- rotating the first and second arms to the process position;
- delivering the wafer for processing via said second arm;
- removing the processed wafer via said first arm;
- returning the wafer to the storage location using the first arm.

Regarding claims 62 and 63 Sieradzki further discloses orienting the wafer prior to returning the wafer to the cassette.

Regarding claim 64 Sieradzki teaches that a cassette is selected by a controller before the wafers are retrieved from said cassette.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sieradzki as applied to claims 60 and 67 above, and further in view of Yamaga et al. Sieradzki teaches the limitations of claims 60 and 67, he does not teach providing a

Art Unit: 3652

senor to monitor the wafers within the cassette. Yamaga et al. US2001/0014267 teaches a method of transferring wafers comprising the steps of:

placing a wafer cassette in a location where wafers may be removed and placed into the cassette;

using a sensor to determine the amount and location of wafers within the cassette;

wherein said first sensing step involves determining if any unprocessed wafers are within said cassette. It would have been obvious to one of ordinary skill in the art, at the time of invention to modify the methods taught by Sieradzki by determining the amount of wafers in the cassette as taught by Yamaga et al. in order to control the device such that it only tries to retrieve wafers that are known to be within the cassette.

#### ***Response to Amendment***

The amendments filed on August 21, 2006 have been entered into the record.

#### ***Allowable Subject Matter***

Claims 1-18 and 67-78 are allowed. The following is a statement of reasons for the indication of allowable subject matter: Independent claims 1 and 14 have limitations pertaining to the first and second arms having a collinear axis. While the Sieradzki reference generally teaches the same methods as in the instant application, he does not teach the two arms as pivoting about a common axis.

Regarding claim 67 the closest prior art of Sieradzki does not teach or suggest that both the first and second arms can retrieve and return substrates to the same storage cassette.

Art Unit: 3652

Regarding claim 74 the closest prior art of Tabrizi et al. does not teach or suggest retrieving a wafer with a first arm and removing a processed wafer with a second arm at the same time.

Claims 2-13,15-18,68-73 and 75-78 are dependent upon allowed claims and are also in condition for allowance.

Claim 61 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The closest prior art of Sieradzki does not teach or suggest rotating either arm past the transfer position when returning a processed wafer to the storage area.

#### ***Response to Arguments***

Applicant's arguments with respect to claim 60 have been considered but are moot in view of the new ground(s) of rejection. The new limitations do not preclude the two arms having different axes.

Applicant's arguments, filed August 21, 2006 with respect to claim 74 have been fully considered and are persuasive. The rejection of claim 74 and any dependent claims have been withdrawn.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3652

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 571-272-6923. The examiner can normally be reached between 7:00-4:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*CMN 4/20/11 11-13-06*  
Charles A. Fox  
Examiner  
Art Unit 3652